

What is claimed is:

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1. A medical device comprising:
a tubular member having a proximal end, a distal end, and a lumen
therebetween, and
a filter removably inserted through the lumen of the tubular member.
 2. The medical device of claim 1, wherein the tubular member is fixed to an outer
surface of a cannula.
 - 10 3. The medical device of claim 2, wherein the cannula has a proximal end adapted
to receive blood from a bypass-oxygenator machine.
 - 15 4. The medical device of claim 1, wherein the filter comprises:
a shaft having a proximal end and a distal end, wherein the distal end of said
shaft is inserted in said tubular member while the proximal end of said shaft extends outside of
said tubular member;
an expansion frame mounted on the distal end of the shaft, wherein said frame
is expandable between a contracted condition and an enlarged condition, wherein said
expansion frame is deployable through a distal opening of said lumen; and
20 a filter attached to the expansion frame.
 5. The medical device of claim 1, wherein the tubular member provides a
hemostatic seal between the filter and the lumen.

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6. The medical device of claim 4, wherein the expansion frame comprises a self-expanding material.

5 7. The medical device of claim 6, wherein the self-expanding material is a thin gauge metal.

8. The medical device of claim 6, wherein the self-expanding material is a shape-memory material.

10 9. The medical device of claim 4, wherein the expansion frame comprises an umbrella structure.

15 10. The medical device of claim 4, wherein the expansion frame comprises a plurality of struts.

11. The medical device of claim 4, wherein the expansion frame comprises a plurality of compressed springs.

20 12. The medical device of claim 1, wherein the tubular member further comprises a suture flange.

13. The medical device of claim 2, wherein the lumen of the tubular member merges and communicates with a lumen of the cannula.